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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,343	03/22/2004	Takahiro Ikeno	118199	8991
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OLIFF & BERRIDGE, PLC				
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ALEXANDRIA, VA 22320-4850				
EXAMINER				
YODER III, CHRISS S				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/805,343

Applicant(s)

IKENO ET AL.

Examiner

Chriss S. Yoder, III

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-20 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

Figure 12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-5, 7-12, and 15-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Saika (US PGPub 2002/01358227).
2. In regard to **claim 1**, note Saika discloses an image sensor (figure 9), comprising a plurality of photoelectric converting elements that convert an optical signal to an electric signal, each of the photoelectric converting elements being provided with an

electric charge output port (paragraphs 0024-0026), a common signal line that is connected to the electric charge output port of each of the photoelectric converting elements (paragraph 0024-0026 and figure 2), a group of channel selection switches that are disposed between the common signal line and each of the photoelectric converting elements and that turns on and off between the electric charge output port and the common signal line (paragraph 0024-0027 and figure 2), a resolution switching device that outputs a resolution switching signal according to a resolution to be set based on an instruction of a resolution setting (paragraph 0042), and a control signal generator that determines an ON-OFF control pattern of the group of channel selection switches, based on the resolution switching signal, and supplies a drive signal to the group of the channel selection switches, based on the determined pattern (paragraph 0042 and figures 4-5).

3. In regard to **claim 2**, note Saika discloses a first signal for setting a period for designating the resolution (figures 4-5: SIN), a second signal for setting a timing for designating the resolution (figure 6: refclk), and a third signal for designating the resolution are externally input to the resolution switching device (figures 4-5: CLK), and the resolution switching signal is output according to an on-off pattern of the third signal at a timing of a rising or falling edge of the second signal when the first signal is on (figures 4-5: the first signal, SIN, is considered to be on when the signal is low, therefore, the resolution switching signal is considered to be output according to an on-off pattern of the third signal, CLK, at a timing of a rising or falling edge of the second signal, refclk, when the first signal, SIN, is on).

4. In regard to **claim 3**, note Saika discloses that the control signal generator is a shift register group including flip-flops provided in association with the group of channel selection switches and a selector switch that switches operation timings of the flip-flops, and the ON-OFF control pattern of the group of channel selection switches is determined by setting the selector switch based on the resolution switching signal output from the resolution switching device (paragraphs 0027-0028 and figure 2).
5. In regard to **claim 4**, note Saika discloses that an on and off of the third signal at the timing of the rising or falling edge of the second signal is expressed as binary data and the resolution switching signal is output based on the binary data (figures 4-5).
6. In regard to **claim 5**, note Saika discloses that the first signal, the second signal, and the third signal are any of a control signal for setting the resolution, a start signal for starting the shift register group, and a clock pulse signal that are input from an external device (figures 4-6: SIN, refclk, and CLK).
7. In regard to **claim 7**, note Saika discloses that the first signal is the start signal, an on-off control for the shift register group is started based on the falling edge of the first signal (figures 4-5: on-off control is started based on the falling edge SIN).
8. In regard to **claim 8**, note Saika discloses that the second signal is the clock pulse signal (paragraphs 0034-0036 and figure 6: refclk).
9. In regard to **claim 9**, note Saika discloses that the resolution switching signal is output for every line of an image to be read (paragraph 0030, the resolution switching signal is output anytime a pixel is read).

10. In regard to **claim 10**, note Saika discloses that the resolution switching signal is output for every page of an image to be read (paragraph 0030, the resolution switching signal is output anytime a pixel is read).

11. In regard to **claim 11**, note Saika discloses that when a resolution other than a maximum resolution is set, the shift register group turns on at least two of the plurality of the channel selection switches on at substantially the same time, according to the set resolution (paragraph 0036, in order perform block reading, the shift register group is considered to turn on at least two of the plurality of the channel selection switches at substantially the same time).

12. In regard to **claim 12**, note Saika discloses that the image sensor outputs a signal including a resolution signal indicative of the resolution (paragraph 0042).

13. In regard to **claim 15**, note Saika discloses an image reading device, comprising a supply portion that supplies sheets (paragraphs 0045-0047 and figure 11: 203), a reading head that reads the supplied sheets, wherein the reading head includes the image sensor of claim 1 (paragraph 0045-0047 and figure 11: 50), and a discharge portion that receives the sheet that has been read by the reading device (paragraphs 0045-0047 and figure 11: 203).

14. In regard to **claim 16**, this is a method claim, corresponding to the apparatus in claim 1. Therefore, claim 16 has been analyzed and rejected as previously discussed with respect claim 1.

15. In regard to **claim 17**, this is a method claim, corresponding to the apparatus in claim 2. Therefore, claim 17 has been analyzed and rejected as previously discussed with respect claim 2.

16. In regard to **claim 18**, this is a method claim, corresponding to the apparatus in claim 5. Therefore, claim 18 has been analyzed and rejected as previously discussed with respect claim 5.

17. In regard to **claim 19**, this is a method claim, corresponding to the apparatus in claim 3. Therefore, claim 19 has been analyzed and rejected as previously discussed with respect claim 3.

18. In regard to **claim 20**, this is a method claim, corresponding to the apparatus in claim 11. Therefore, claim 20 has been analyzed and rejected as previously discussed with respect claim 11.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saika (US PGPub 2002/01358227).

20. In regard to **claim 13**, note Saika discloses the use of an image sensor, comprising a plurality of photoelectric converting elements that switched on and off to

change the resolution of the image output over a common output line as claimed in claim 5 above. Therefore, it can be seen that Saika fails to explicitly disclose that at least four resolutions are selectable based on the three signals. Official Notice is taken that the concepts and advantages of having at least four resolutions that are selectable are notoriously well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify the Saika device to include the use of at least four selectable resolutions in order to allow the user to balance the relationship between the speed of image readout and image quality, in order to meet application specific requirements.

21. In regard to **claim 14**, note Saika discloses the use of an image sensor, comprising a plurality of photoelectric converting elements that switched on and off to change the resolution of the image output over a common output line as claimed in claim 1 above. Therefore, it can be seen that Saika fails to explicitly disclose that when a resolution signal indicative of a resolution indicates an inappropriate resolution, image reading is stopped. Official Notice is taken that the concepts and advantages of cancelling a procedure when an inappropriate value is entered are notoriously well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify the Saika device to stop image reading when a resolution signal indicative of a resolution indicates an inappropriate resolution in order to prevent an error that can cause improper image data to be output.

Allowable Subject Matter

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US006697108B1: note the use of control signals to control image readout.

US006473538B2: note the use of control signals to control image readout at different resolutions.

US 20020186312A1: note the use of control signals to control image readout at different resolutions.

US005262871A: note the use of image readout at different resolutions.

US006888568B1: note the use of control signals to control image readout.

US 20010030700A1: note the use of control signals to control image readout at different resolutions.

US006580455B1: note the use of control signals to control image readout at different resolutions.

US006794627B2: note the use of image readout at different resolutions.

US 20020145669A1: note the use of control signals to control image readout at different resolutions.

US 20040169752A1: note the use of control signals to control image readout.

US005818526A: note the use of control signals to control image readout.

US005717199A: note the use of control signals to control image readout at different resolutions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chriss S. Yoder, III whose telephone number is (571) 272-7323. The examiner can normally be reached on M-F: 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CSY
February 20, 2008


TUAN HO
PRIMARY EXAMINER